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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,714	04/02/2004	Serge Dube	12708-21US-1 PTN/df	9455

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EXAMINER

ALI, MOHAMMAD M

ART UNIT	PAPER NUMBER
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3744

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/815,714

Applicant(s)

DUBE ET AL.

Examiner

Mohammad Ali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2005.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1,4-8,11-14 and 17-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,4-8,11-14 and 17-20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 4-5, 8, 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hkelifa et al., (6,260,376) in view of Goettl (4,237,859). Hkelifa et al., disclose an air conditioning system with thermal energy storage comprising a refrigeration system including a compressor 19 for compressing the refrigerant to high-pressure gas state, a condenser 11 for condensing the refrigerant to a high-pressure liquid state, an expansion valve/unit 12 expanding the refrigerant to low-pressure liquid state, an evaporator 15 for evaporating the low-pressure liquid refrigerant to low-pressure gas state by absorbing heat, and returns the gaseous refrigerant to the compressor 19, the refrigeration system also comprises an energy storage stage reservoir 2 in parallel to the evaporator/evaporation stage 15 having a container in which a medium/water 42

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is disposed in heat exchange relationship with a second refrigerant, the second refrigerant being circulated in a closed loop in heat exchange relationship with the first refrigerant, such that the first refrigerant absorbs heat from the medium through the second refrigerant during a period of a day when the compressor is in less demand, the medium being used thereafter as a heat absorber in an evaporation stage of an air conditioning cycle. See Fig. 1. Khelifa et al., disclose the invention substantially as claimed as stated above. However Khelifa et al., do not disclose to direct medium to absorb heat. Goettl teaches the use of directing medium/liquid 14a to a heat exchanger 32 disposed in the air movement path through an air handler device 30 to absorb heat from the air. See Fig. 1, column 6, line 15 to column 7, line 59. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the air conditioning system of Khelifa et al., in view of Goettl such that a provision for directing the medium could be provided in order to absorb heat.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-7, 11 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilles in view of Applicant's prior art Fig. 1A and Fig. 1B. Khelifa et al., in view of Goettl disclose the invention substantially as claimed as stated above. However, Khelifa et al., in view of Goettl do not disclose night and day time for the different modes of operation of the energy-storage for claims 6 and 11, the summer days capacity of the energy-storage for claim 7, and selecting the

time period of a day for a first and second electricity tariff for claim 17, choosing the portion of a day for operating at a lower capacity and at a higher capacity for claim 18 and choosing a specific times for duration of specific operations for claims 19 and 20. The prior art Fig. 1A and 1B teach the above features as admitted by the applicant in description of Fig. 1a and 1b in Para [0005]. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the operation of air conditioning system of Khelifa et al., in view of Goettl as applied to claims 1 and 14 above and further in view of the knowledge gleaned from Applicant's prior art Fig. 1A and 1B such that desired modes of operation at specific time could be provided in order to meet the above claimed features. This is supported by Khelifa et al., by disclosing, "excess cold power can be effectively stored, and recovered when required". See column 6, lines 1-13.

Response to Arguments


Applicant's arguments, see remarks pages 6-7, filed 08/01/05, with respect to the rejection(s) of claim(s) 1, 4-8, 11-14 and 17-20 under 102 and 103 rejections have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of additional new prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad Ali whose telephone number is (571) 272-4806. The examiner can normally be reached on Monday to Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-4834

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Mohammad M. Ali
August 19, 2005